

AMENDMENT TO THE CLAIMS

Please amend claims 1, 2, 5-9, and 12-20, matter to be added is shown in underline and matter to be deleted is shown in strikethrough; and add new claims 21-24, as follows:

1. (currently amended) Apparatus for cleaning residue containing tubes, comprising:
 - a) a hose having a spray tip containing a plurality of orifices;
 - b) a water source ~~coupled to said hose capable of~~ delivering water to said hose at a pressure in excess of 1,000 psi; and
 - c) a framework supporting i) transport means mounted to rotate at said framework for extending and retracting said hose with a reciprocating motion, ii) reel means mounted to rotate at said framework for coiling ~~for collecting~~ and distributing said hose along a longitudinal drive axis common to each of said transport and reel means ~~and including means for stacking said hose into coils aligned one on top of the other and concentric to said drive axis~~ and iii) a motor and drive linkage coupled to rotate said transport means and said reel means, whereby said hose and spray tip are rotated as they extend and retract along a bore of said tube to clean said residue means for simultaneously rotating said transport means and said reel means, whereby said hose and spray tip are rotated as they extend and retract along a bore of said tube to clean said residue.
2. (currently amended) Apparatus as set forth in claim 1 including an arm that directs said hose to and from a hub of said reel means ~~wherein said reel means includes a hollow arm that extends from said longitudinal axis and through which arm said hose~~

~~extends and is directed to and from a hub mounted concentric to said longitudinal drive axis.~~

3. (original) Apparatus as set forth in claim 2 wherein said hose is collected at a tapered surface of said hub that extends at an acute angle relative to the longitudinal drive axis.

4. (original) Apparatus as set forth in claim 2 wherein said hub exhibits a frustum shape and is concentrically mounted within a surrounding housing.

5. (currently amended) Apparatus as set forth in claim 1 wherein a swivel couples water to said hose 2 wherein said reel means includes a plurality of members mounted in length adjustable relation to each other to vary the diameter of said hub.

6. (currently amended) Apparatus as set forth in claim 1 ~~2~~ wherein said transport means includes a plurality of pinch rollers mounted to contact said hose and a control linkage that directs ~~control means for directing~~ the reciprocating axial movement of said hose in synchrony with the rotational movement of said hose.

7. (currently amended) Apparatus as set forth in claim 6 including an adjustable linkage mounted to resiliently bias said pinch rollers to contact said hose ~~wherein said pinch rollers are driven by air operated motors and a chain linkage and said control means comprises an air valve.~~

8. (currently amended) Apparatus as set forth in claim 2 wherein said arm is mounted to coil said hose on said hub ~~to pivot relative to said hub such that said hose can be directed onto said hub in a plurality of stacked adjacent coils.~~

9. (currently amended) Apparatus as set forth in claim 2 wherein said reel means comprises a hub and a concentric housing ~~includes a plurality of planar members~~

~~mounted to a plurality annular bands, wherein a tapered channel extends in each planar member at an acute angle relative to the longitudinal drive axis and wherein said hose is directed into and from said channel.~~

10. (original) Apparatus as set forth in claim 1 including cleaning means mounted concentric to said longitudinal drive axis for cleaning the external surface of said hose.

11. (original) Apparatus as set forth in claim 10 including a brush mounted concentric to said longitudinal drive axis for cleaning the external surface of said hose.

12. (currently amended) Apparatus as set forth in claim 1 ~~10~~ including a manifold mounted concentric to said longitudinal drive axis and coupled to a water source and having a plurality of outlets for directing spray to clean ~~cleaning the external surface of~~ said hose.

13. (currently amended) Apparatus as set forth in claim 14 ~~including a motor, a drive belt and a plurality of pulleys mounted to control the rotation of said hose~~ ~~1 wherein a motor, drive belt and a plurality of pulleys determine the speed of rotation of said reel means.~~

14. (currently amended) Apparatus for cleaning residue containing tubes, comprising:

- a) a hose having a spray tip containing a plurality of orifices; and
- b) a water source ~~coupled to said hose and~~ delivering water to said hose ~~thereto~~ at a pressure in the range of 1,000 to 60,000 psi; and
- c) a frame work supporting a reel having a hub, wherein said reel is mounted to rotate at said framework, an arm mounted to coil said hose onto said hub, a plurality of rollers mounted to rotate at said frame work and coupled to direct said hose to and from

~~said reel, concentrically mounted to an outer housing, wherein said reel is mounted to rotate at said framework, arm means having a hollow bore for directing said hose onto said hub in stacked coils, and means for rotating said reel means and said hose as said hose is directed to and from said reel means, whereby said hose and spray tip are rotated as they extend and retract along a bore of said tube to clean said residue.~~

15. (currently amended) Apparatus as set forth in claim 14 wherein said hub exhibits a frustum shape ~~and including a manifold mounted concentric to said hose and coupled to a water source and having a plurality of outlets for directing spray to cleaning the external surface of said hose.~~

16. (currently amended) Apparatus for cleaning residue containing tubes, comprising:

- a) a hose having a spray tip containing a plurality of orifices;
- b) a water source ~~coupled to said hose capable of~~ delivering water to said hose at a pressure in the range of 1,000 to 60,000 psi;
- c) a framework supporting i) a plurality of pinch rollers mounted to extend and retract said hose with a reciprocating motion along a longitudinal drive axis, ii) a reel having a hub for collecting and distributing said hose, iii) an arm mounted at an acute angle relative to said longitudinal drive axis to coil said hose along a tapered surface of said hub, and iv) a motor and a drive linkage coupled to rotate said pinch rollers and said reel, whereby said hose and spray tip are rotated as they extend and retract along a bore of said tube to clean said residue ~~transport means for extending and retracting said hose with a reciprocating motion, ii) reel means for collecting and distributing said hose along a longitudinal drive axis common to each of said transport and reel means and~~

~~including a hollow arm that extends at an acute angle relative to said longitudinal axis and through which arm said hose extends and is directed to and from a tapered surface of a hub mounted concentric to said longitudinal drive axis such that said hose is stacked in a plurality of coils aligned one on top of the other and concentric to said drive axis iii) means for simultaneously rotating said transport means and said reel means, whereby said hose and spray tip are rotated as they extend and retract along a bore of said tube to clean said residue.~~

17. (currently amended) Apparatus as set forth in claim 16 including a manifold mounted ~~to rotate~~ concentric to said longitudinal drive axis and coupled to a water source and having a plurality of outlets directed to clean said hose ~~for directing spray to cleaning the external surface of said hose.~~

18. (currently amended) Apparatus as set forth in claim 16 wherein a motor, drive belt and a plurality of pulleys determine the speed of rotation of said hose ~~each of said transport and said reel means.~~

19. (currently amended) Apparatus as set forth in claim 16 including an adjustable, resilient linkage biasing said pinch rollers into contact with said hose ~~wherein said transport means includes a plurality of pinch rollers mounted to contact said hose, means for controlling the contact force of said rollers with said hose and air controlled means for directing the reciprocating axial movement of said hose in synchrony with the rotational movement of said hose.~~

20. (currently amended) Apparatus for cleaning residue containing tubes, comprising:

- a) a hose having a spray tip containing a plurality of orifices;

b) a water source ~~coupled to said hose capable of~~ delivering water to said hose at a pressure in the range of 1,000 to 60,000 psi; and

c) a framework supporting i) a plurality of rollers mounted to resiliently contact and direct said hose with a reciprocating motion along a longitudinal drive axis, ii) a reel having a hub for collecting and distributing said hose, iii) a member mounted to coil said hose on said hub, and iv) a motor and a drive linkage coupled to rotate said rollers and said reel, whereby said hose and spray tip are rotated as they extend and retract along a bore of said tube to clean said residue ~~transport means for extending and retracting said hose with a reciprocating motion and including a plurality of pinch rollers mounted to contact said hose, means for controlling the contact force of said rollers with said hose and air controlled means for directing the reciprocating axial movement of said hose~~, ii) ~~reel means for collecting and distributing said hose along a longitudinal drive axis common to each of said transport and reel means and including a hollow arm that extends at an acute angle relative to said longitudinal drive axis and through which arm said hose extends and is directed to and from a tapered surface of a hub mounted concentric to said longitudinal drive axis such that said hose is stacked in a plurality of coils aligned one on top of the other and concentric to said drive axis~~, iii) ~~means for simultaneously rotating said transport means and said reel means in synchrony with the rotational movement of said hose~~, and iv) ~~a manifold mounted to said framework to rotate concentric to said longitudinal drive axis and coupled to a water source and having a plurality of outlets for directing spray to cleaning the external surface of said hose, whereby said hose and spray tip are rotated as they extend and retract along a bore of said tube to clean said residue.~~

21. (new) Apparatus as set forth in claim 14 including an adjustable, resilient linkage biasing said plurality of rollers into contact with said hose.

22. (new) Apparatus as set forth in claim 14 wherein a swivel couples water to said hose.

23. (new) Apparatus as set forth in claim 16 wherein a swivel couples water to said hose.

24. (new) Apparatus as set forth in claim 20 wherein a swivel couples water to said hose.